

ABSTRACT

Apparatus and method are disclosed for selecting a transmit antenna diversity scheme according to a variation speed of a fading channel in a mobile communication system. A user equipment (UE) estimates a channel response of a pilot channel by receiving a pilot channel signal from a Node B; estimates a variation speed of a fading channel by using the estimated channel response and determining a transmit antenna diversity scheme suitable to the variation speed of the fading channel; and transmits feedback information including the determined transmit antenna diversity scheme to the Node B, so that the Node B can determine a transmit antenna diversity scheme for a channel signal to be transmitted to the UE based on the transmit antenna diversity scheme information included in the feedback information. In this way, the Node B adaptively applies a transmit antenna diversity according to a channel condition.